



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,334	08/23/2005	Edeltraud Hagemeister	PAT-01078	7934

26922 7590 04/03/2009

BASF CORPORATION
Patent Department
1609 BIDDLE AVENUE
MAIN BUILDING
WYANDOTTE, MI 48192

EXAMINER

CHEUNG, WILLIAM K

ART UNIT	PAPER NUMBER
----------	--------------

1796

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

04/03/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

MARJORIE.ELLIS@BASF.COM
cdavenport@cantorcolburn.com
Mgolota@CantorColburn.com

Office Action Summary

Application No.

10/531,334

Applicant(s)

HAGEMEISTER ET AL.

Examiner

WILLIAM K. CHEUNG

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. In view of the amendment filed February 13, 2009, new claim 20 has been added. Claims 1-20 are pending.
2. In view of the amendment filed February 13, 2009, the objection of Claims 1-19 due to minor informalities is withdrawn. Further, the rejection of Claims 5, 6 under 35 U.S.C. 112, second paragraph, is withdrawn.

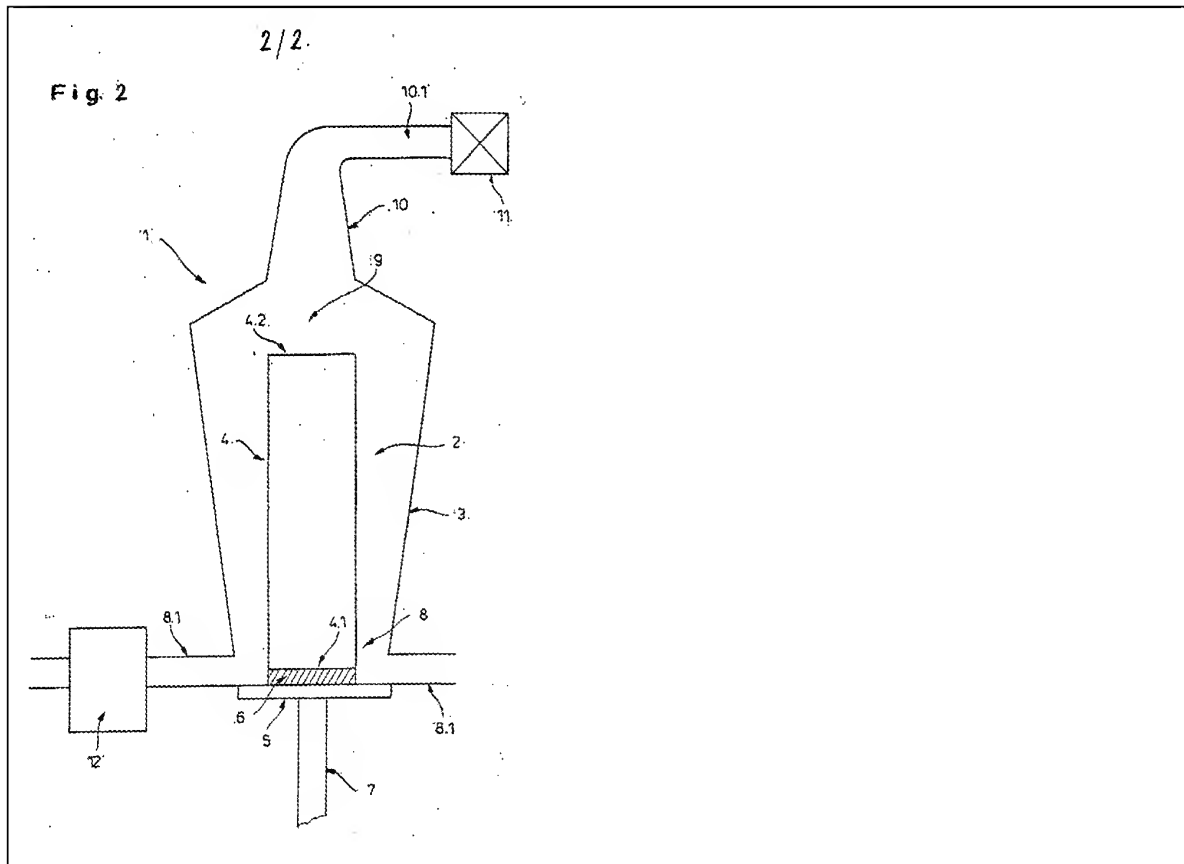
Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

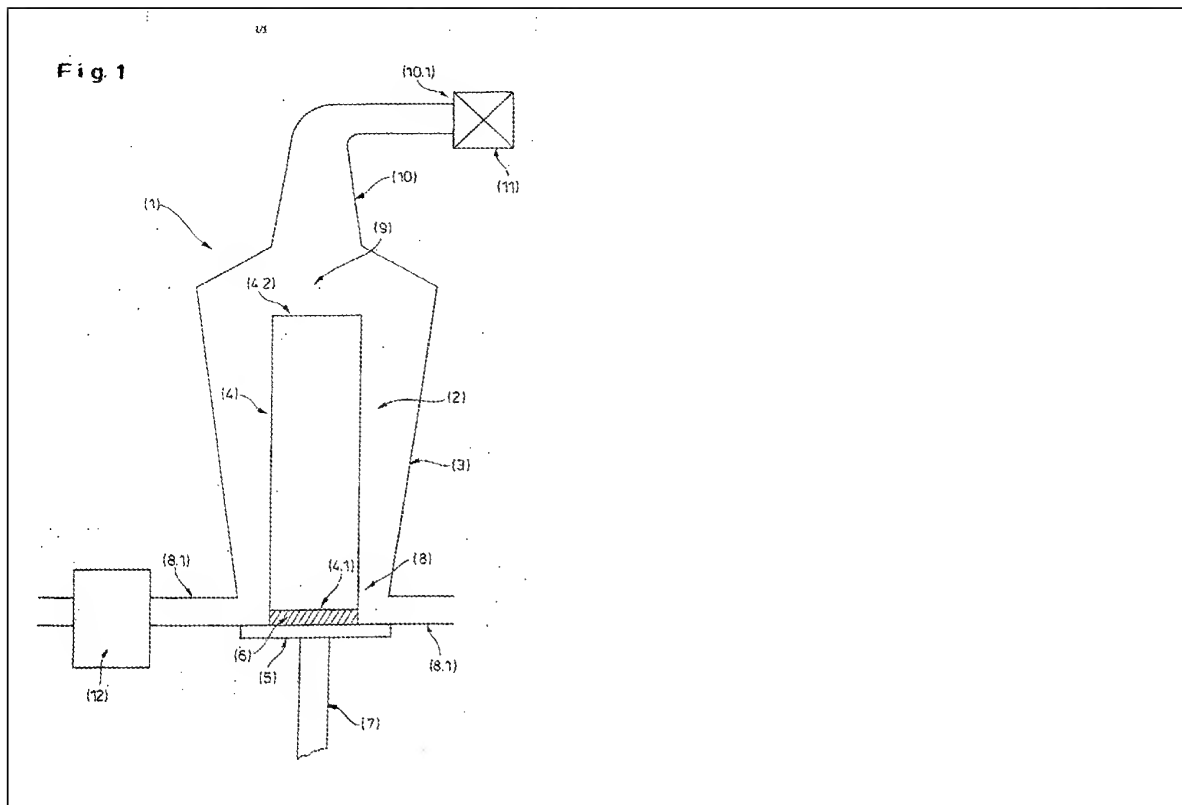
4. Claims 1-19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 10-24 of copending Application No. 10/549,624. Although the conflicting claims are not identical, they are not patentably distinct from each other because the apparatus as claimed seems to be able to perform the functions of the apparatus of claims 10-24 of copending Application No. 10/549,624, particularly in light of Figure 2 of copending Application No. 10/549,624.



This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant's arguments filed February 13, 2009 have been fully considered but they are not persuasive. Applicants argue that, in view of the possibility of further amendment to the claims, a terminal disclaimer may be filed when the instant application is found allowable. Therefore, the instant ODP rejection is maintained.

5. Claims 1-19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application No. 10/486,893. Although the conflicting claims are not identical, they are not patentably distinct from each other because the apparatus as claimed seems to be able to perform the functions of the apparatus of 1-11 of copending Application No. 10/486,893, particularly in light of Figure 1 of copending Application No. 10/486,893.



This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant's arguments filed February 13, 2009 have been fully considered but they are not persuasive. Applicants argue that, in view of the possibility of further amendment to the claims, a terminal disclaimer may be filed when the instant application is found allowable. Therefore, the instant ODP rejection is maintained.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1796

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moritz et al. (WO 0000280), translated in Moritz et al. (US 7,122,161).

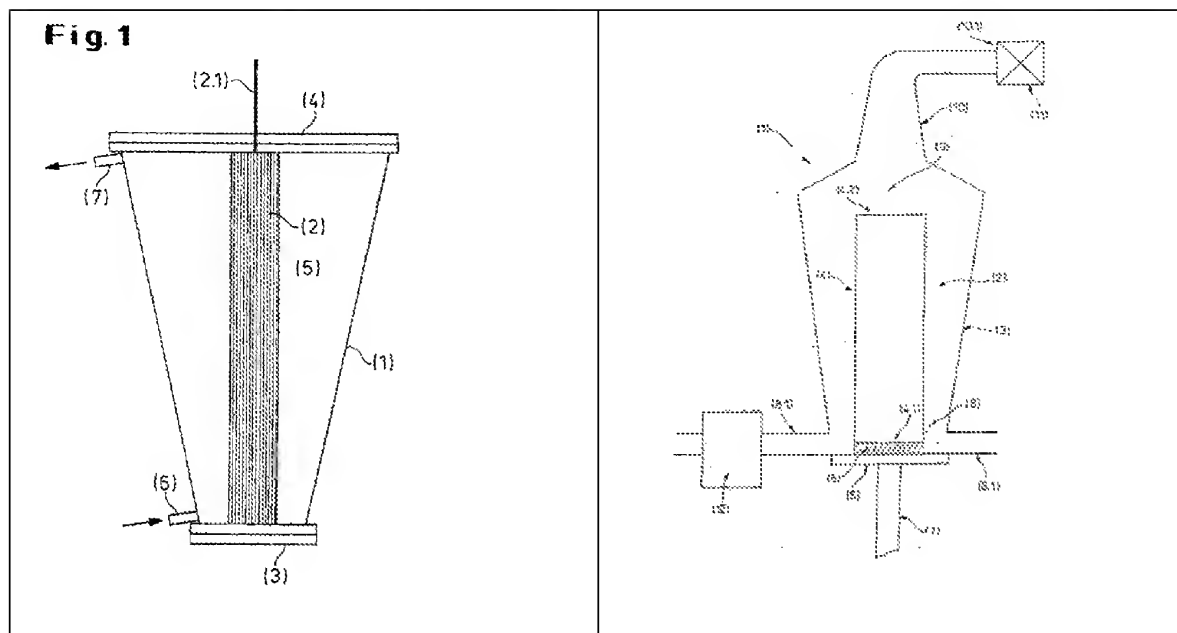
1. (Currently Amended) A Taylor reactor (~~101, 201, 301, 401~~) comprising a reactor housing (~~103, 203, 303, 403~~), ~~having~~ a rotor (~~104, 204, 304, 404~~) which is disposed in the volume enclosed by the reactor housing (~~103, 203, 303, 403~~) and is rotatable about an axis, ~~having~~ a reaction volume (~~102, 202, 302, 402~~) formed between ~~the an~~ inner periphery of the reactor housing (~~103, 203, 303, 403~~) and ~~the an~~ outer periphery (~~104.3, 204.3, 304.3, 404.3~~) of the rotor (~~104, 204, 304, 404~~), ~~having~~ at least one inlet (~~108.1, 208.1, 308.1, 408.1~~) for the reactants and/or process media and ~~having~~ at least one outlet (~~110, 210, 310, 410~~) for the reaction products, disposed in the direction of the axis (A) at a distance from the inlet (~~108.1, 208.1, 308.1, 408.1~~), ~~wherein~~ wherein the reactor housing (~~103, 203, 303, 403~~) and/or the rotor (~~104, 204, 304, 404~~) are equipped such that the cross section of the reaction volume (~~102, 202, 302, 402~~) initially rises increases at least over part of a length of the rotor from the inlet (~~108.1, 208.1, 308.1, 408.1~~) to the outlet (~~110, 210, 310, 410~~) in an area adjacent the inlet and the cross section of the reaction volume but the rise in cross section does not increase at least over part of the length of the rotor in an area adjacent the outlet (~~104, 204, 304, 404~~).

Art Unit: 1796

10. (Currently Amended) A Taylor reactor having a reactor housing ~~(103, 203, 303, 403)~~, having a rotor ~~(104, 204, 304, 404)~~ which is disposed in the volume enclosed by the reactor housing ~~(103, 203, 303, 403)~~ in such a way as to be rotatable about an axis ~~(A)~~, having a reaction volume ~~(102, 202, 302, 402)~~ formed between the inner periphery ~~(103.1, 203.1, 303.1, 403.1)~~ of the reactor housing ~~(103, 203, 303, 403)~~ and the outer periphery ~~(104.3, 204.3, 304.3, 404.3)~~ of the rotor ~~(104, 204, 304, 404)~~, having at least one inlet ~~(108.1, 208.1, 308.1, 408.1)~~ for the reactants and/or process media, in particular as claimed in claim 1, ~~wherein~~ **wherein** an outlet region ~~(109, 209, 309, 409)~~ which opens out into an outlet ~~(110, 210, 310, 410)~~ is provided which in the reactor housing ~~(103, 203, 303, 403)~~ at one end face of the rotor ~~(104, 204, 304, 404)~~ adjoins the reaction volume ~~(102, 202, 302, 402)~~ and narrows to an outlet ~~(110, 210, 310, 410)~~ and ~~wherein~~ **wherein** the end face of the rotor ~~(104, 204, 304, 404)~~ is designed such that the reaction volume ~~(102, 202, 302, 402)~~ opens out at least essentially without deadspaces into the outlet ~~(110, 210, 310, 410)~~.

13. (Currently Amended) A Taylor reactor
 having a reactor housing ~~(503)~~,
 having a rotor ~~(504)~~ which is disposed in the volume enclosed by the reactor housing ~~(503)~~ in such a way as to be rotatable about an axis ~~(A)~~,
 having a reaction volume ~~(502)~~ formed between the inner periphery ~~(503.1)~~ of the reactor housing ~~(503)~~ and the outer periphery ~~(504.3)~~ of the rotor ~~(504)~~, having at least one inlet ~~(508.1)~~ for the reactants and/or process media and having at least one outlet ~~(510)~~ for the reaction products, in particular as claimed in claim 1, ~~wherein~~ **wherein** the outlet ~~(510)~~ opens out into the reaction volume ~~(502)~~ at a radial distance from the axis ~~(A)~~.

Moritz et al. (col. 13, claim 1) disclose a Taylor reactor having all the basic features as claimed.



According to Figure 1 that applicants' claims are referencing to, the difference between the invention of claims 1-20 and Moritz et al. is that Moritz et al. do not disclose some of the specific features being claimed, such as rotatably mounted at one end in the reactor floor and unmounted on the other below the outlet region, and a pressure maintenance valve.

However, since Moritz et al. (col. 13, claim 1) disclose all the basic features as claimed in a claim, Moritz et al. have clearly indicated the criticality of all the basic features in a Taylor reactor for performing a reaction in claim 1. Hence, all the other non-disclosed features are considered non-essential. Nevertheless, the scope of claim 1 of Moritz et al. clearly fully encompasses and teaches all the essential features of a Taylor reactor for conducting a reaction using a Taylor reactor. Motivated by the expectation of success of performing a chemical reaction with the Taylor reactor of

Moritz et al., it would have been obvious to one of ordinary skill in art to apply “routine engineering optimization” practices to modify or to adjust the non-essential features of the Taylor reactor of Moritz et al. to obtain the minor variation version of the Moritz et al. to obtain the Taylor reactor as claimed.

Regarding claims 17-19, Moritz et al. (col. 10, line 42, 53) clearly teach the process for using the disclosed apparatus for making polymers, film, paints, adhesives, and coating materials.

Applicant's arguments filed February 13, 2009 have been fully considered but they are not persuasive. Applicants argue that the claimed Taylor reactor has a specific geometry that provide some advantages over the Taylor reactor of Moritz et al. in bulk polymerization, where it is not possible to increase the monomer conversion to an extent such that substantial freedom from monomers and narrow molecular weight distribution and molecular weight polydispersity. Applicants also argue that the claimed Taylor reactor resolve the adverse reaction regime that may result in considerable quantities of residual monomers. Without the proper geometry, there may also be instances of coagulation and polymer deposition, which in some cases may even lead to a blockage of the reactor of the product outlet. However, applicants fail to provide any evidence to support such argument.

In view of the reasons set forth above, the rejection of claims 1-20 is proper.

Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 1796

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

10531334/William K Cheung/
Primary Examiner, Art Unit 1796

William K. Cheung, Ph. D.
Primary Examiner
March 27, 2009